

LIQUID-LEVEL SENSOR HAVING MULTIPLE SOLID
OPTICAL CONDUCTORS WITH SURFACE DISCONTINUITIES

ABSTRACT OF THE DISCLOSURE

5 A liquid-level sensor is used to sense the level of a liquid which may be present within a volume to different heights above the bottom of the volume. The sensor has at least two solid optical conductors, wherein each solid optical conductor includes an outer surface having at least one reflective surface discontinuity of sufficient size to interfere with a total internal reflection of the solid optical conductor when the reflective surface discontinuity does not contact the liquid. A support positions the reflective surface discontinuity of each of the
10 at least two solid optical conductors at a location corresponding to a different height above the bottom of the volume. A light source introduces light into a first end of each of the solid optical conductors. A light detector structure receives light that has been introduced into each of the solid optical conductors and has traveled through the respective solid optical conductor at least as far as at least one
15 of the reflective surface discontinuities of the respective solid optical conductor. The light detector structure may be a non-electrical light diffuser positioned so that a second end of each of the solid optical conductors directs a respective output beam onto a respective region of the light diffuser, with each of the
20 respective regions having a visual indication thereon of being illuminated by its respective output beam.

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